

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-8 (Previously Cancelled).

Cancel claims 9-16.

Claims 17-37 (Previously Cancelled).

Cancel claims 38-64.

65. (New) An optical reader in communication with a spaced apart host processor, said optical reader comprising:

- (a) an imaging assembly including a two dimensional solid state image sensor and an optical assembly focusing an image of a target onto said solid state two dimensional image sensor;
- (b) a memory;
- (c) an analog to digital converter coupled to said two dimensional solid state image sensor and converting signals from said solid state two dimensional image sensor into a plurality of gray scale values for storage into said memory;
- (d) a controller coupled to said imaging assembly, said memory, and said analog to digital converter, where said controller is configured to capture frames of image data into said memory; and
- (e) a hand held housing encapsulating said imaging assembly, said memory, said analog to digital converter, and said controller, said hand held housing being adapted to be held in human hand so that said hand held housing is freely movable between a variety of positions relative to said spaced apart host processor;
- (f) wherein said optical reader is configured to operate in a first mode in which said optical reader receives from said spaced apart host processor a trigger instruction, wherein said controller substantially on receipt of said trigger instruction stores a

frame of image data into said memory, and automatically attempts to decode a decodable bar code symbol represented in said frame of image data;

(g) wherein said optical reader is further configured to operate in a second mode in which said optical reader receives from said spaced apart processor a frame upload instruction, wherein said controller substantially on receipt of said frame upload instruction uploads a last captured image data of said reader to said spaced apart host processor.

66. (New) The optical reader of claim 65, wherein said controller includes a processor and an ASIC.

67. (New) The optical reader system of claim 65, wherein said two dimensional solid state image sensor is a CMOS image sensor.

68. (New) The optical reader of claim 65, wherein said optical reader is further configured to operate in a third mode in which said optical reader receives from said spaced apart host processor a single frame instruction, wherein said optical reader substantially on receipt of said single frame instruction captures a single frame of image data corresponding to scene presently in a field of view of said optical reader.

69. (New) The optical reader of claim 65, wherein said optical reader further includes a radio frequency communication link facilitating radio communication with said spaced apart host processor.

70. (New) The optical reader of claim 65, wherein optical reader includes a display, and wherein said optical reader is further configured to operate in a mode in which said optical reader receives from said spaced apart host processor a display output instruction, wherein said optical reader substantially on receipt of said display output instruction displays on said display a predetermined indicia.

71. (New) A system comprising:

(a) a optical reader including an imaging assembly, a display, a keyboard, an acoustic output device and a controller configured to capture image data and decode decodable bar code symbols therein, said optical reader further including a hand held housing encapsulating said imaging assembly and said controller, said hand held housing further supporting said display and said keyboard; and

(b) a host processor spaced apart from optical reader, wherein said hand held housing is adapted to be held in a human hand so that said optical reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is configured so that in a first mode said host processor sends to said optical reader a beeper control instruction, wherein said optical reader substantially on receipt of said beeper control instruction actuates said acoustic output device so that said acoustic output device emits a series of beeps;

(d) wherein said system is further configured so that in a second mode said host processor sends to said optical reader a display control instruction, wherein said optical reader substantially on receipt of said display control instruction causes a predetermined indicia to be displayed on said display.

72. (New) The system of claim 71, wherein said optical reader further includes a light source, and wherein said system is configured so that said host processor in a further mode sends to said optical reader a light source control instruction, said optical reader substantially on receipt of said light source instruction causes said light source to flash on and off.

73. (New) The system of claim 71, wherein said acoustic output device is a speaker.

74. (New) The system of claim 71, wherein said imaging assembly includes a two dimensional solid state image sensor.

75. (New) The system of claim 71, wherein said display is provided by a liquid crystal display.

76. (New) A method for attracting attention of an operator of a hand held optical reader, said hand held optical reader having an artificial light source, an acoustic output device, a wireless communication link, a display, and being configured to decode decodable bar code symbols represented in captured images, said method comprising the steps of:

- (a) programming said hand held optical reader to wirelessly receive at least one component control instruction from a spaced apart host processor, said component control instruction being selected from the group consisting of a light source flashing component control instruction which when executed by said hand held optical reader results in said artificial light source flashing according to a predetermined pattern, an acoustic output device component control instruction which when executed by said hand held optical reader causes said acoustic output device to emit a series of beeps, and a display output component control instruction which when executed by said hand held optical reader results in a predetermined indicia being displayed on said display, wherein said programming step includes the step of configuring said hand held optical reader to execute said at least one component control instruction to produce a user-perceivable result substantially on receipt of said component control instruction; and
- (b) wirelessly sending from a spaced apart host processor to said hand held optical reader at least one of said light source flashing component control instruction, said acoustic output device component control instruction, and said display output component control instruction, whereby a user-perceivable result is produced by said hand held optical reader substantially on receipt of said at least one component control instruction so that attention of an operator of said hand held optical reader is attracted.

77. (New) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said spaced apart host processor to said hand held optical reader.

78. (New) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said

spaced apart host processor to said hand held optical reader, wherein said hand held optical reader is configured so that substantially on receipt of said light source component control instruction, said hand held optical reader directs light toward a target of said hand held optical reader.

79. (New) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said acoustic output component control instruction from said spaced apart host processor to said hand held optical reader.

80. (New) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said display output component control instruction from said spaced apart host processor to said hand held optical reader.

81. (New) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said spaced apart host processor to said hand held optical reader, and wirelessly sending said acoustic output component control instruction from said spaced apart host processor to said hand held optical reader.

82. (New) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said spaced apart host processor to said hand held optical reader, and wirelessly sending said display output component control instruction from said spaced apart host processor to said hand held optical reader.

83. (New) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said acoustic output component control instruction from said spaced apart host processor to said hand held optical reader, and wirelessly sending said display output component control instruction from said spaced apart host processor to said hand held optical reader.

84. (New) An optical reader system comprising:

- (a) a hand held optical reader including an imaging assembly having a two dimensional solid state image sensor, an optical assembly focusing an image of a target onto said two dimensional solid state image sensor, a memory, a controller configured to capture a frame of image data representing a two dimensional area image into said memory, a trigger, and a hand held housing supporting said imaging assembly;
- (b) a host processor spaced apart from said hand held optical reader; and
- (c) a communication link facilitating data communication between said host processor and said hand held optical reader;
- (d) wherein said hand held housing is adapted to be grasped by a human hand so as to moveable between variable positions relative to said spaced apart host processor;
- (e) wherein said hand held optical reader is configured to receive from said spaced apart host processor a trigger instruction, and wherein said hand held optical reader is configured to operate in a mode in which said hand held optical reader is responsive to both of an actuation of said trigger and a receipt of said trigger instruction from said spaced apart host processor so that substantially on receipt either of a signal ensuing from an actuation of said trigger or of said trigger instruction from said spaced apart host processor said controller captures a frame of image data representing a two dimensional area and automatically attempts to decode decodable bar code symbols represented in said frame of image data.

85. (New) The optical reader system of claim 84, wherein said hand held optical reader is configured to operate in a mode of operation in which said hand held optical reader receives from said spaced apart host processor a single frame instruction, wherein said hand held optical reader substantially on receipt of said single frame instruction captures a single frame of image data representing a two dimensional area image into said memory.

86. (New) The optical reader system of claim 84, wherein said hand held optical

reader is configured to operate in a second mode of operation in which said hand held optical reader receives from said spaced apart host processor a light source instruction, and substantially on receipt of said light source instruction causes said at least one light source to flash according to a predetermined pattern.

87. (New) The optical reader system of claim 84, wherein said hand held optical reader is further configured to operate in a mode of operation in which said hand held optical reader receives from said spaced apart host processor an image upload instruction, wherein said hand held optical reader substantially on receipt of said image upload instruction sends image data most recently captured by said hand held optical reader to said spaced apart host processor.

88. (New) The optical reader system of claim 84, further including an acoustic output device, wherein said hand held optical reader is further configured to operate in a mode in which said hand held optical reader receives an acoustic output instruction, wherein said hand held optical reader substantially on receipt of said acoustic output instruction causes said acoustic output device to emit a series of beeps.

89. (New) The optical reader system of claim 84, further including a display, wherein said hand held optical reader is further configured to operate in a mode in which said hand held optical reader receives from said spaced apart host processor a display instruction, wherein said hand held optical reader substantially on receipt of said display instruction causes a predetermined indicia to appear on said display.

90. (New) The optical reader system of Claim 84, wherein said hand held optical reader includes at least one hardware component, wherein said hand held optical reader is further configured so that substantially on receipt either of said signal ensuing from said trigger being actuated or of said trigger instruction from said spaced apart host processor, said hand held optical reader initializes said at least one hardware component.

91. (New) An optical reader system comprising:

- (a) a hand held optical reader having an imaging assembly, an illumination assembly including at least one light source, said hand held optical reader being configured to decode bar code symbols and including a hand held housing encapsulating said imaging assembly, said imaging assembly including one of a two dimensional solid state image sensor and a one dimensional solid state image sensor;
- (b) a host processor spaced apart from said hand held housing, such that said hand held housing is moveable between various positions relative to said host processor; and
- (c) a wireless communication link facilitating wireless communication between said hand held optical reader and said host processor, said host processor and said hand held optical reader being free of physical contact with one another and being devoid of a tethered communication link there between;
- (d) wherein said hand held optical reader is configured to operate in a first mode of operation in which said hand held optical reader wirelessly receives from said spaced apart host processor a trigger instruction;
- (e) wherein said hand held optical reader substantially on receipt of said trigger instruction wirelessly received from said spaced apart host processor captures image data and automatically attempts to decode bar code symbols represented in said captured image data.

92. (New) The optical reader system of claim 91, wherein said imaging assembly includes a two dimensional solid state image sensor.

93. (New) The optical reader system of claim 91, wherein said hand held optical reader is configured to operate in a second mode of operation in which said hand held optical reader receives from said spaced apart host processor a light source instruction, and substantially on receipt of said light source instruction causes said at least one light source to flash according to a predetermined pattern.

94. (New) The optical reader system of claim 91, wherein said hand held optical reader is further configured to operate in a mode of operation in which said hand held optical reader receives from said spaced apart host processor an image upload instruction, wherein said hand held optical reader substantially on receipt of said image upload instruction sends image data most recently captured by said hand held optical reader to said spaced apart host processor.

95. (New) The optical reader system of claim 91, further including an acoustic output device, wherein said hand held optical reader is further configured to operate in a mode in which said hand held optical reader receives an acoustic output instruction, wherein said hand held optical reader substantially on receipt of said acoustic output instruction causes said acoustic output device to emit a series of beeps.

96. (New) The optical reader system of claim 91, further including a display, wherein said hand held optical reader is further configured to operate in a mode in which said hand held optical reader receives from said spaced apart host processor a display instruction, wherein said hand held optical reader substantially on receipt of said display instruction causes a predetermined indicia to appear on said display.